

Case report

Bilateral patellar tendon rupture

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Bilateral infrapatellar tendon rupture is a very rare event. There are only ten previous reports in the literature and, of these, nine patients had an underlying systemic illness.^{1, 2, 3}

CASE 1

A 58-year-old man with a past history of acquired emphysema was admitted after his legs 'gave way' as he walked down a short flight of steps. He was unable to extend either knee actively. Bilateral patellar tendon ruptures were diagnosed clinically from the history, and the finding of swelling and a palpable gap below the lower pole of each patella. The diagnosis was confirmed radiologically (Figure). There was no history of systemic illness and the patient had never received steroids. His physique was not suggestive of a hereditary collagen disorder and there was no history of tendon swelling or rupture at any other site. The ESR was moderately elevated, 75mm/hr, but the RA latex, Rose Waaler/DAT titre and the anti-nuclear antibody tests were negative. Plasma protein electrophoresis was normal, serum urate 0.26 mmol/l and serum calcium 2.4 mmol/l. At operation, the infrapatellar tendons were found to be ruptured through the mid-zone of the tendon bodies. Open repair was performed using an absorbable suture. Biopsy showed no evidence of underlying inflammation. He was in hospital for three weeks, and both legs were immobilised for six weeks in plaster of paris cylinders. After six months he had slowly regained full active extension in both knees. No cause for the raised ESR was found and this fell to normal levels spontaneously. He is now fully mobile and requires no external aid.

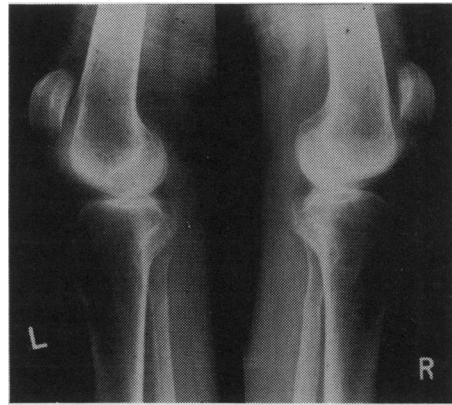


Figure. Lateral X-ray views of bilateral patellar tendon rupture. The high-riding patella, with the distance from the lower pole of the patella to the tibial tuberosity greater than the length of the patella is diagnostic.

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CASE 2

A 66-year-old man, with a past history of duodenal ulcer, was admitted after his legs 'gave way' as he walked up some steps just outside his home. On examination he was unable to extend either knee actively. Bilateral patellar tendon rupture was diagnosed clinically and confirmed radiologically. As in the previous case, there was no history of generalised disease, steroid therapy, tendon swelling or rupture. The ESR was 35 mm/hr, the RA latex, Rose Waaler/DAT titre and the anti-nuclear factor tests were negative; serum urate 0.30 mmol/l and serum calcium 2.35 mmol/l. Open repair was carried out with an absorbable suture material. Rupture through the bodies of the infrapatellar tendons was confirmed, and biopsy showed no pathological change in the tendon structure. It took him seven months to regain full extension at the knees, after readmission for intensive rehabilitation. He is now mobile, but requires a walking-stick.

DISCUSSION

There has been only one previous case report of this condition where there was no associated systemic disease. Of the nine cases with associated factors, one had a severe iron deficiency anaemia of uncertain aetiology, four were suffering from active systemic lupus erythematosus, two from active rheumatoid disease and two had chronic renal failure with hyperparathyroidism. Of the six patients with connective tissue disease, five were on steroid therapy. Spontaneous rupture of tendons is well documented in collagen disorders or in patients who have been treated with local steroids. In these cases, tendon rupture occurs spontaneously because of 'stress' microtears superimposed upon connective tissue with impaired healing ability.⁴ It is less certain how the tendon would weaken sufficiently to rupture without excessive stress in people without systemic disease. Infrapatellar tendon ruptures generally occur at the tendosseous junction,⁵ but in both of the present cases the tear was through the body of the tendon. This may indicate degeneration in the body of the tendon itself rather than at the distal insertion.

The outcome in all cases of bilateral infrapatellar tendon rupture has been good. Despite intercurrent illness all have been able to walk unaided after an interval of seven to twenty-seven months: 5–10 degree loss of active extension is fairly common, but does not seem to affect overall mobility to any great degree. The types of suture material used have varied and do not appear to be critical. All patients had plaster of paris cylinders applied postoperatively for periods ranging from three to 11 weeks. Thereafter, the emphasis has been on intensive physiotherapy in order to hasten full recovery.

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